HABITAT

- The combination of physical, chemical and biological elements necessary to sustain an organism or population of organisms.

LIMITING FACTOR

- An element of the habitat which controls the number of or survival rate of the organism or population of organisms.

COMPENSATORY MORTALITY

- Natural mortality which does not affect population stability over time.

E—011437

ADDITIVE MORTALITY

- Mortality which is over and above natural loss to the population and which can affect population stability over time.

E—011438

Water Supply Reliability

Linkages

- Reliability can be improved by actions which recover and protect endangered species and their habitat which also:
  - Increase the opportunities to transport water through the Delta
  - Create flexibility to more effectively use water supplies
- Synergistic benefits for system aquatic habitats and water quality can be built into water management programs by:
  - Multi-objective management of the timing of Delta inflows and outflows
  - Multi-objective management of system demands, water transport and system risk

E-011439

Water Supply Reliability

Problems

- Conflicts have increased between uses of the Estuaries fresh water, magnifying natural hydrologic fluctuations
- The resultant disparity between water demand and water supply has created economic uncertainty in the water service areas
- Supply uncertainty results from the vulnerability of the Delta water transport system to catastrophic failure

Water Supply Reliability

Objective

- Reduce the conflict between water supply beneficial uses
- Provide a better match between quantity and timing of supply and beneficial uses by providing for:
  - Both the short and long-term planning horizons
  - Both the supply and demand sides
  - Flexibility for the water transport system
  - Effective risk management for the water transport system

System Vulnerability

Problems

- Failure of Delta levees can result in flooding of Delta island farmland and loss of habitat
- Long-term loss of an island can expose adjacent islands to increased wave action and erosion
- Flooding of key Delta islands can increase the potential for sea water intrusion further up the Delta
- The cost of maintaining and improving the levees is high
    - Complex array of agencies with authorities over levees contributes to cost

E—011442

System Vulnerability

Objectives

- Reduce the conflict between the ecosystem, water supply, and water quality functions of the system by:
  - Implementing an integrated and comprehensive program for Delta levees and channels
  - Provide a stable and constant funding source for system maintenance and flood contingency
  - Reduce the conflict between protection of endangered species/habitat and levee maintenance activities

E—011443

System Vulnerability

Linkages

- Benefits to both the system vulnerability and the Ecosystem can be achieved by:
  - Incorporating habitat protection elements in the levee system actions
  - Incorporating levee stabilization actions in habitat elements
  - Reducing land surface subsidence as part of levee stabilization and habitat enhancement actions

WATER QUALITY PROBLEMS

Water Quality is Often Inadequate for:

- Drinking Water Needs
- Agricultural Needs
- Some Industrial Needs
- Recreational Needs
- Environmental Needs

E—011445

DRAFT WATER QUALITY PRIMARY OBJECTIVE

"Provide good water quality for all beneficial water users".

"Beneficial uses" covers a wide range of water uses including:

- *Fish and Wildlife Use*
- *Municipal and Industrial Use*
- *Agricultural Use*
- *Recreational Use*
- *Other Uses*

E—011446

LINKAGES

Water quality, water supply, ecosystem quality are interdependent:

- Quantity and Timing of Flow
- Operation of Upstream Reservoirs
- Water Supply Reliability
- Delta Environmental Conditions

E—011447